

Ultramid® B3WG6 GP

Polyamide 6

BASF Corporation

Message:

Glass fibre reinforced and heat ageing resistant injection moulding grade, with enhanced flowability used e.g. for automobile manifolds

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 30% filler by weight		
Features		Good liquidity		
		Good heat aging resistance		
		Oil resistance		
Uses		Application in Automobile Field		
Agency Ratings		EC 1907/2006 (REACH)		
RoHS Compliance		RoHS compliance		
Forms		Particle		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.36	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	
Melt Volume-Flow Rate (MVR) (275°C/10.0 kg)	55.0	--	cm ³ /10min	ISO 1133
Molding Shrinkage				ISO 294-4
Vertical flow direction	0.75	--	%	ISO 294-4
Flow direction	0.25	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	6.3 - 6.9	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.9 - 2.3	--	%	ISO 62
Viscosity Number (96% H ₂ SO ₄)	145	--	cm ³ /g	ISO 307
Mold Shrinkage - constrained ¹	0.30	--	%	
Maximum operating temperature-short cycle operation	200	--	°C	
Automotive Materials (> 1.00 mm)	Passed	--		FMVSS 302
Polymer Abbreviation	PA6-GF30	--		
Screw Speed			mm/sec	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	9600	5600	MPa	ISO 527-2

Tensile Stress (Break)	165	100	MPa	ISO 527-2
Tensile Strain (Break)	3.9	7.5	%	ISO 527-2
Flexural Modulus	8700	5500	MPa	ISO 178
Flexural Stress	260	160	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	14	--	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	75	--	kJ/m ²	ISO 179/1eU
23°C	90	100	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	16	--	kJ/m ²	ISO 180/A
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	220	--	°C	ISO 75-2/B
1.8 MPa, not annealed	205	--	°C	ISO 75-2/A
Melting Temperature	220	--	°C	ISO 11357-3
Flammability	Dry	Conditioned		Test Method
Flame Rating (1.60 mm)	HB	--		UL 94
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0		hr	
Suggested Max Moisture	0.15		%	
Hopper Temperature	80.0		°C	
Rear Temperature	260		°C	
Middle Temperature	270		°C	
Front Temperature	280		°C	
Nozzle Temperature	280		°C	
Processing (Melt) Temp	270 - 290		°C	
Mold Temperature	80.0 - 90.0		°C	
Injection instructions				
Residence Time : <10 min				
NOTE				

1. Test box with central gating, dimensions of base (107*47*1,5) mm, processing conditions: TM = 280°C, TW = 80°C

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